Amendments to the Drawings:

The attached replacement sheets of drawings include changes to FIGS. 1 and 3, where the label "Prior Art" has been added. The replacement sheets are to replace the original sheets including FIGS. 1 and 3.

REMARKS

Reconsideration and allowance of this application as amended are respectfully requested.

Claim 2 is not canceled and remains pending and under consideration. Claim 2 has been further amended to clarify its language. FIGS. 1 and 3 have been amended per Examiner's request and replacement sheets are filed herewith to obviate the Examiner's objections. Claims 6, 10 and 11 have been amended to correct typographical errors and to obviate objections.

The objections to Claims 15-16, 12-12 and 17-19 for their dependence are respectfully traversed since the dependence is proper.

In addition, a supplemental Information Disclosure Statement is filed with this response for consideration by the Patent Office.

The rejections to pending claims based on prior art cited in the Office Action of August 11, 2005 should be withdrawn for reasons set forth below.

Claims 2 and 3 stand rejected under 35 102(b) as being anticipated by Komiya. Claims 2 and 3 as amended, however, are distinctly patentable over Komiya.

Both Claims 2 and 3 recites "resetting each pixel after each readout of the pixel." Hence, after each readout, the pixel starts anew and begin to accumulate charge. In contrast, Komiya teaches in FIG. 21 that a CCD sensor is NOT reset after the integration time t1 and continues to accumulate charge at the end of the integration time t1 until the end of the integration time t2. In fact, this part of Komiya teaches away from Claims 2 and 3 in this regard. Therefore, the rejection based on Komiya as stated in the Office Action is improper under 35 102(b) and must be withdrawn.

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Claims 10, 11, 13, 16 and 18 stand rejected under 35 102(b) as being anticipated by Koch. These claims in their current form as presented in this response, however, are distinctly patentable over Koch.

Each of Claims 10, 11, 13, 16 and 18 recites two different readouts with different integration times form each pixel in a single frame readout. Claim 10 as amended, for example, recites "reading two separated rows of pixels in each single row readout process to produce two different readout signals with different integration times for each pixel in a single frame readout wherein said reading reads an entire row at each reading time." Claim 11 also recites "in each frame readout, reading two separated rows of pixels in each single row readout process, wherein said two separated rows of pixels represent a first row of pixels representing the image integration for a shorter integration time, and a second row of pixels representing the image integration for a longer integration time."

In contrast, Koch in the cited portions in Column 5, line 31 to Column 6, line 20 teaches sensor devices that the integration time for pixels of each row of the sensor array is not fixed and can be controlled. However, for each frame output in Koch, only a single integration time is produced from each pixel. Therefore, Koch fails to disclose the features in Claims 10, 11, 13, 16 and 18. Accordingly, the rejections must be withdrawn.

Claims 4-9 stand rejected under 35 USC 103(a) over Komiya and Koch. Claim 4 as amended, however, recites "in each frame readout, reading out each of the pixels at least at both of a first shorter integration time, which begins at said first time, and ends at a second time and a second longer integration time, which begins at said first time and ends at a third time subsequent to said second time wherein said reading out

comprises reading out first row of pixels representing said first shorter integration time and a second row of pixels representing said second longer integration time" and "resetting each pixel after each readout of the pixel." As discussed above, Komiya teaches away from the feature of "resetting each pixel after each readout of the pixel" and Koch fails to teach two different integration times for each pixel in a single frame readout. Hence, the combined teaching of Komiya and Koch in the combination suggested by the Office Action does not provide the proper support for the rejection. Accordingly, Claim 4 and its dependent Claims 5-9 are patentable over Komiya and Koch.

Claim 12 stands rejected under 35 USC 103(a) over Koch in view of Komiya. As a dependent claim for Claim 11, Claim 12 has all features in Claim 11. As discussed above, Claim 11 is patentable over Koch. In addition, Komiya teaches away of the feature of "resetting each pixel after each readout of the pixel" in Claim 11. Hence, Claim 12 is patentable over Koch in view of Komiya.

Claim 15, which depends on Claim 10, stands rejected under 35 USC 103(a) over Koch in view of Morimura. As discussed above, Koch fails to teach two different integration times for each pixel in a row in a single frame readout as recited in Claim 10 and Claim 15. The Office Action fails to show that how the combination of the teaching in Koch and the Abstract and text in Column 2, lines 17-31 discloses the combination in Claim 15. In addition, the Office Action fails to show any motivation or suggestion to combine Koch and Morimura as suggested. For at these reasons, the rejection to Claim 15 is improper and must be withdrawn.

Claims 17 and 19, which are dependent on Claim 11, both stand rejected under 35 USC 103(a) as being obvious over Koch.
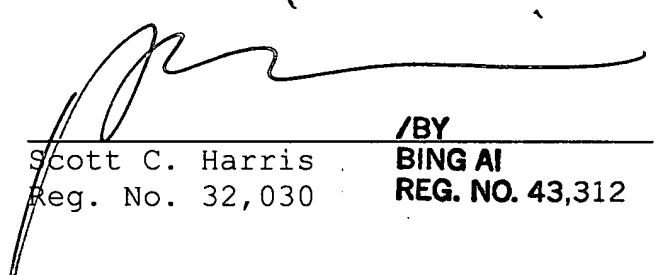
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As discussed above, Claim 11 is patentable over Koch. For at least this reason, Claims 17 and 19 are patentable over Koch.

Claim 20 stand rejected under 35 USC 103(a) as being obvious over Morimura and Komiya. FIG. 21 in Komiya is specifically cited to show disclosure first and second integration times and their relation. As discussed above, Komiya teaches away from the resetting feature in Claim 20 as amended. Hence, the combined teaching of Morimura and Komiya as suggested by the Office Action fails to teach the combination of Claim 20. For this reason, Claim 20 as amended is patentable. Accordingly, Claims 21-24 are patentable.

In view of the above, Applicants ask that all claims be allowed. Please charge a fee of $1020 for extension of time to and including February 13, 2006, for filing this response and a fee of $180 for filing the Information Disclosure Statement, and any other charges or credits, to Deposit Account No. 06-1050.

Respectfully submitted,

Date: February 13, 2006

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